

Technics

Turntable System

SL-B5

Operating Instructions



The model number of this product may be found on the back of the unit, and the serial number, on the bottom of the unit.

Please note the model and serial numbers of this unit in the space provided and retain this booklet as a permanent record of your purchase to aid identification in the event of theft.

MODEL NUMBER SL-B5

SERIAL NUMBER _____

Before operating this set, please read these instructions completely.

Parts identification

1

Hinge

45-rpm adaptor

Headshell stand

Balance weight

Turntable mat

Stylus-pressure ring

Center spindle
(Single-play spindle)

Anti-skating control knob

Turntable platter

Cueing lever

Strobe dots

Arm rest

Strobe-illuminator/pilot lamp

Arm clamp

Speed select knob

Tonearm

Pitch control knob

Locking nut

Before use

Caution:

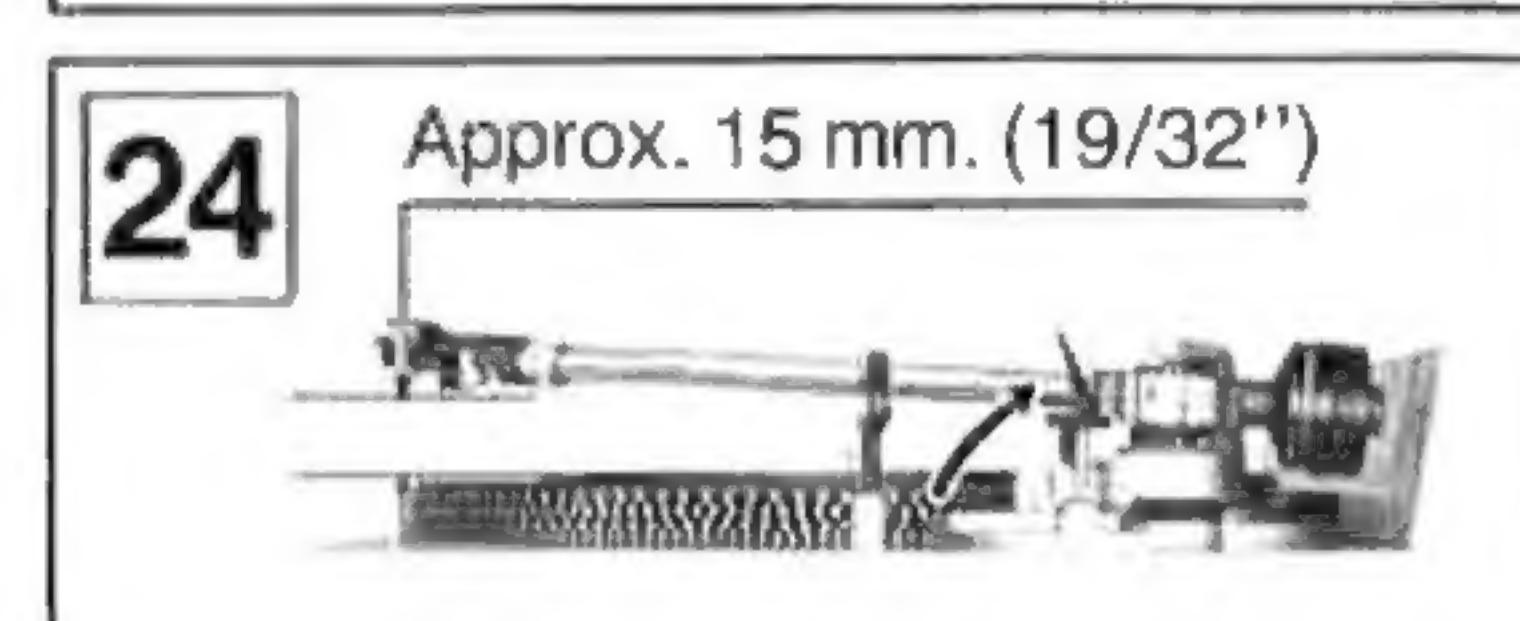
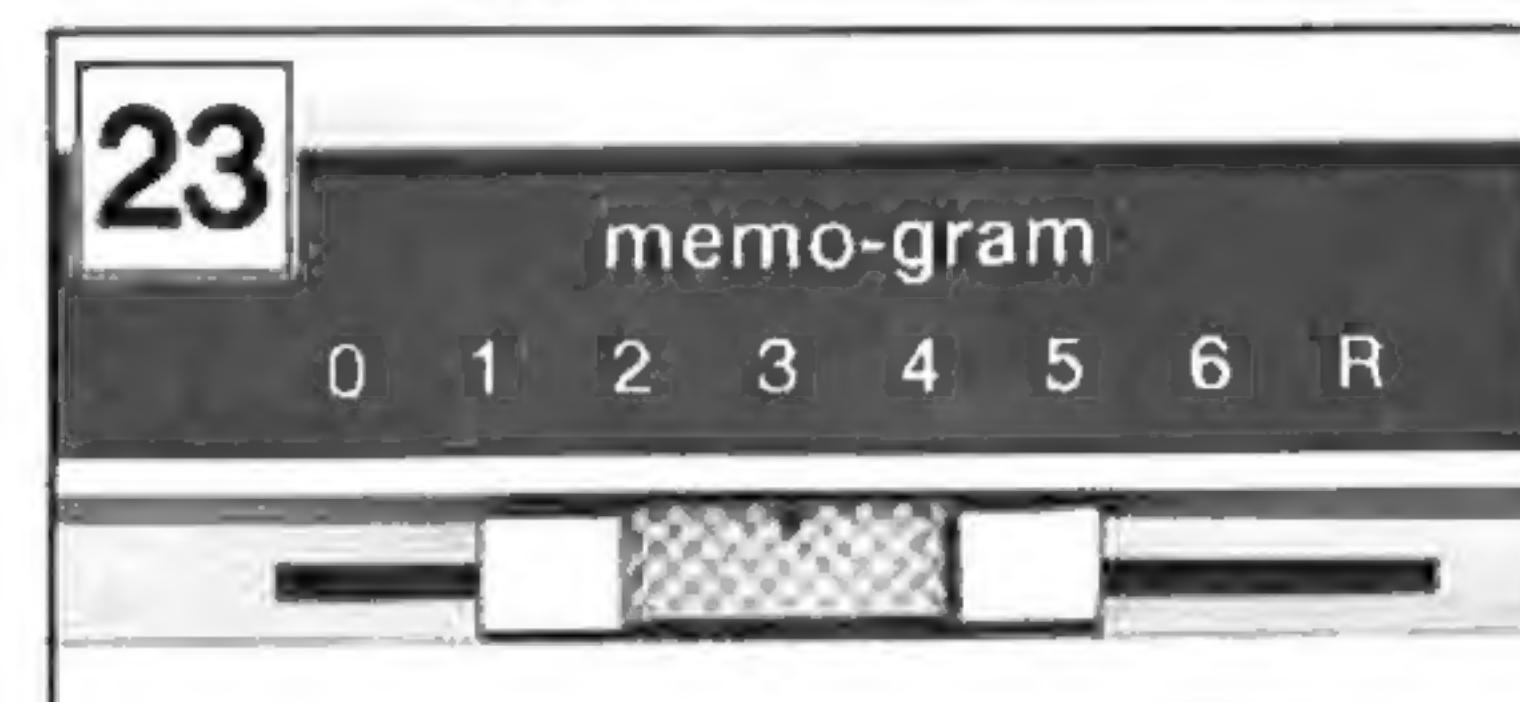
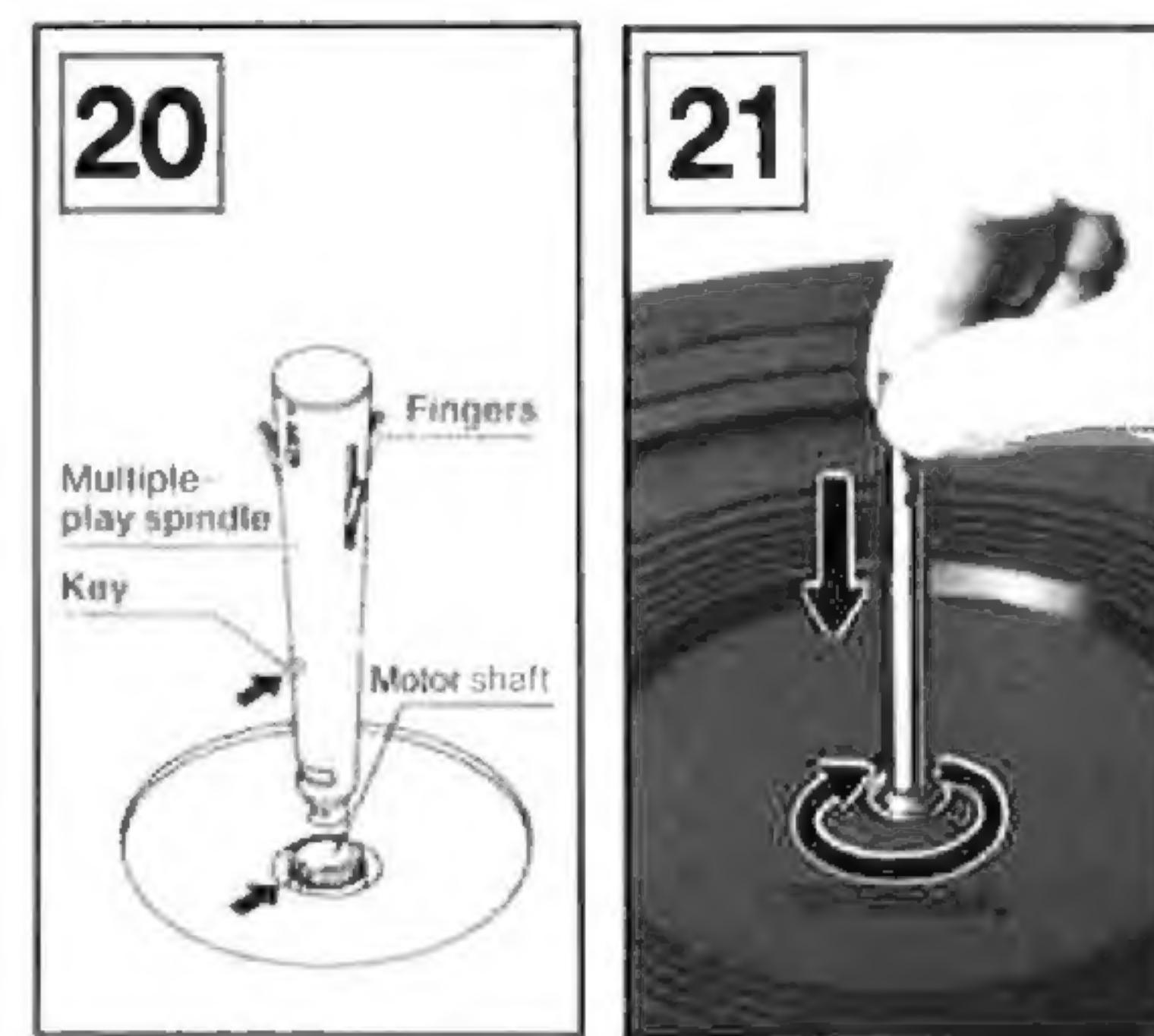
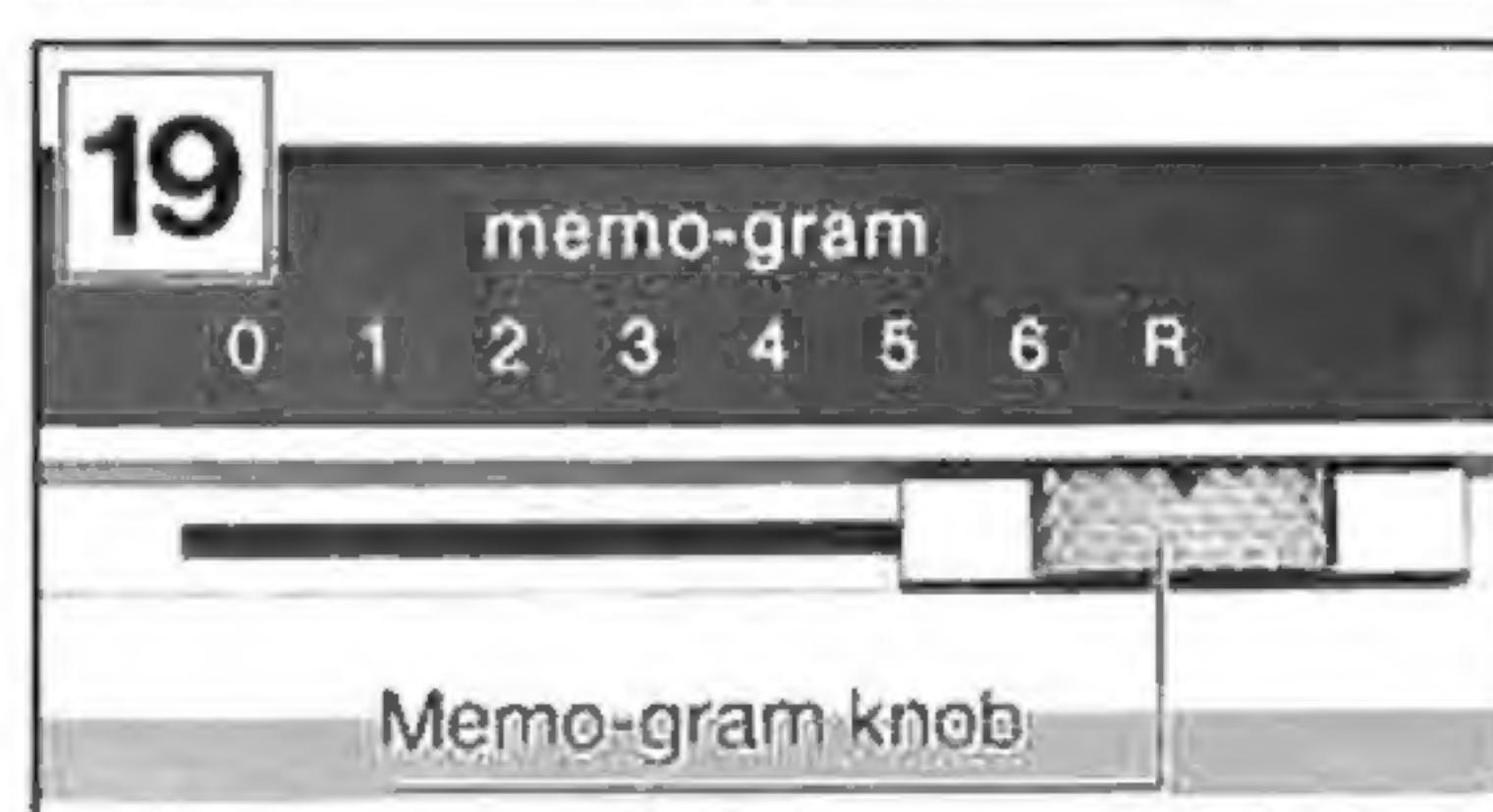
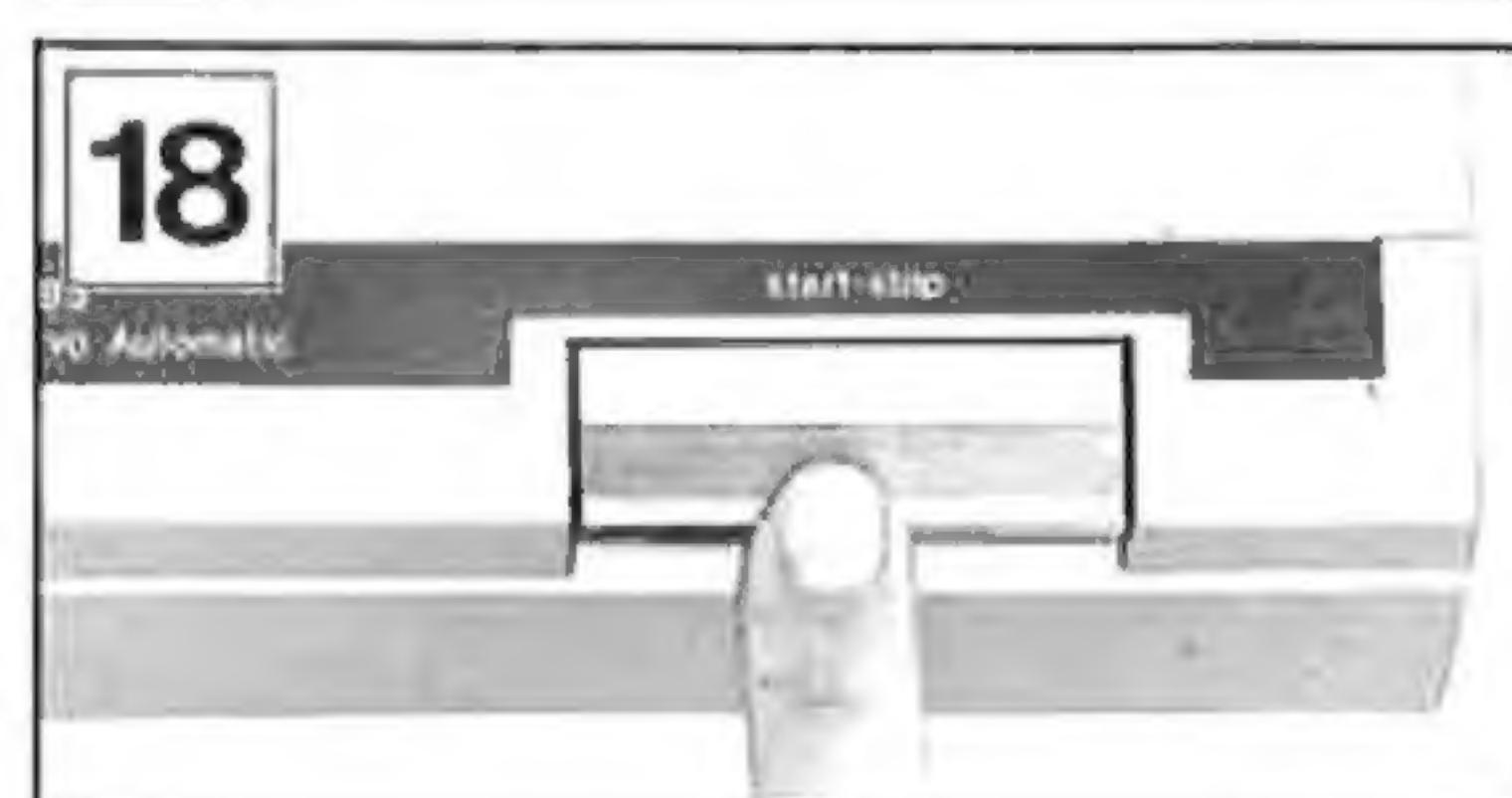
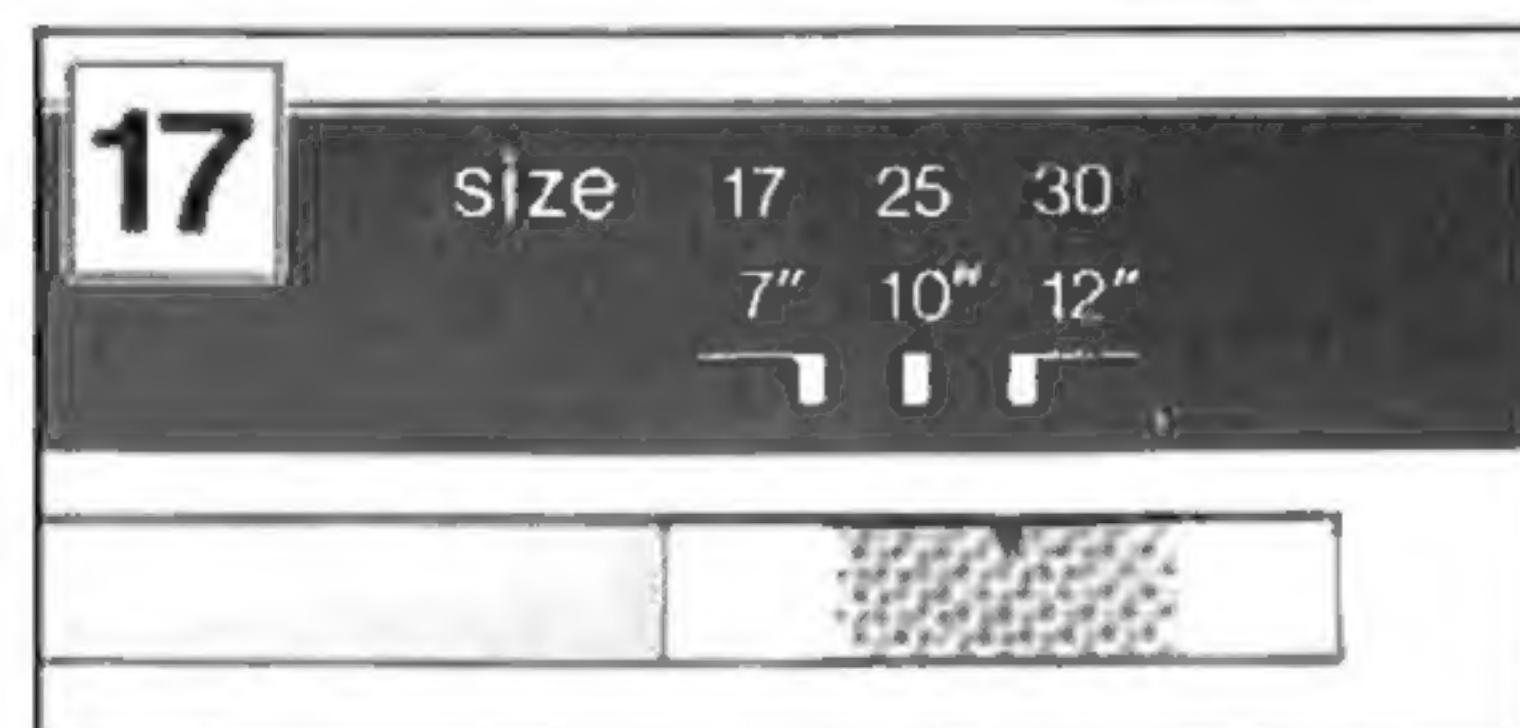
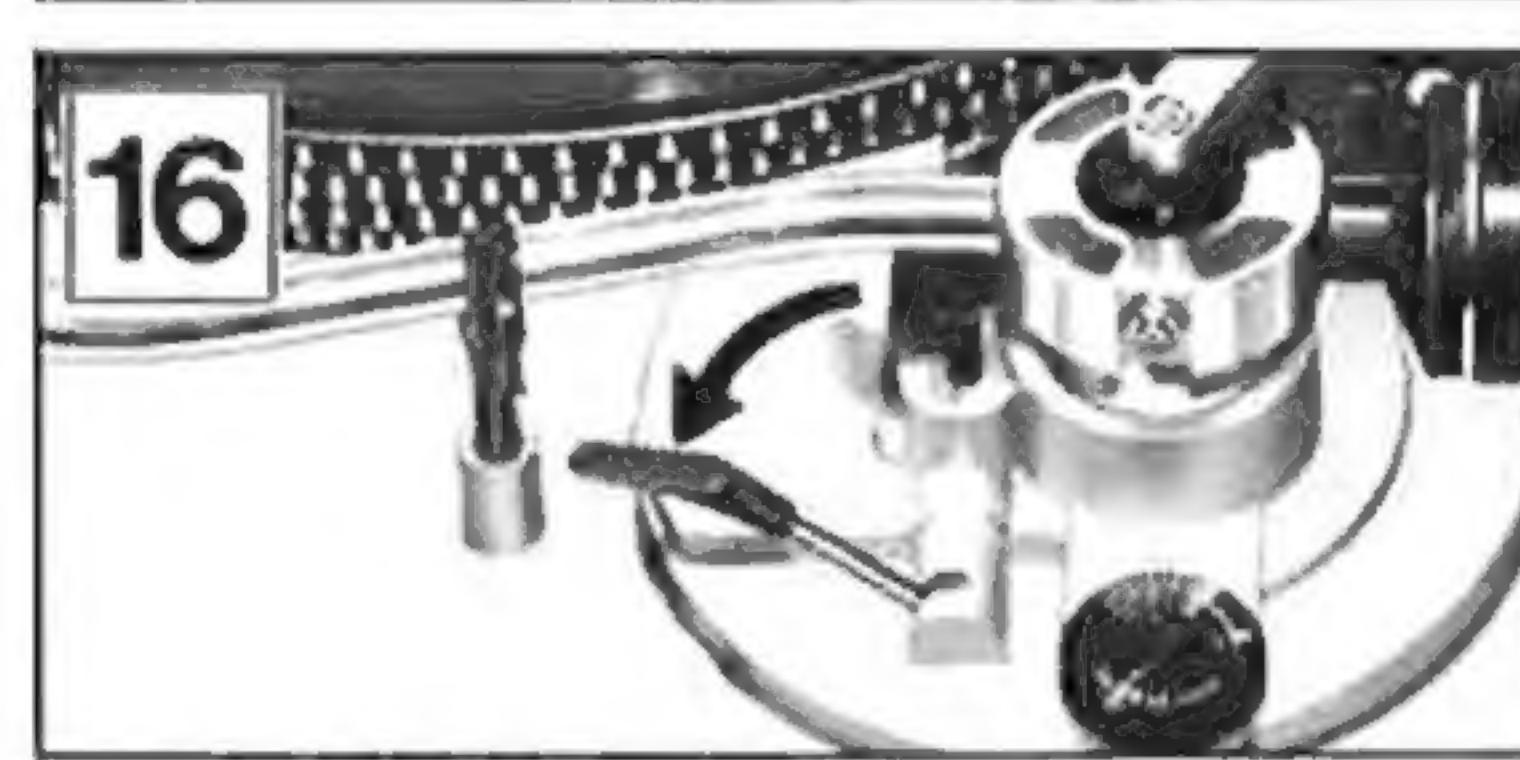
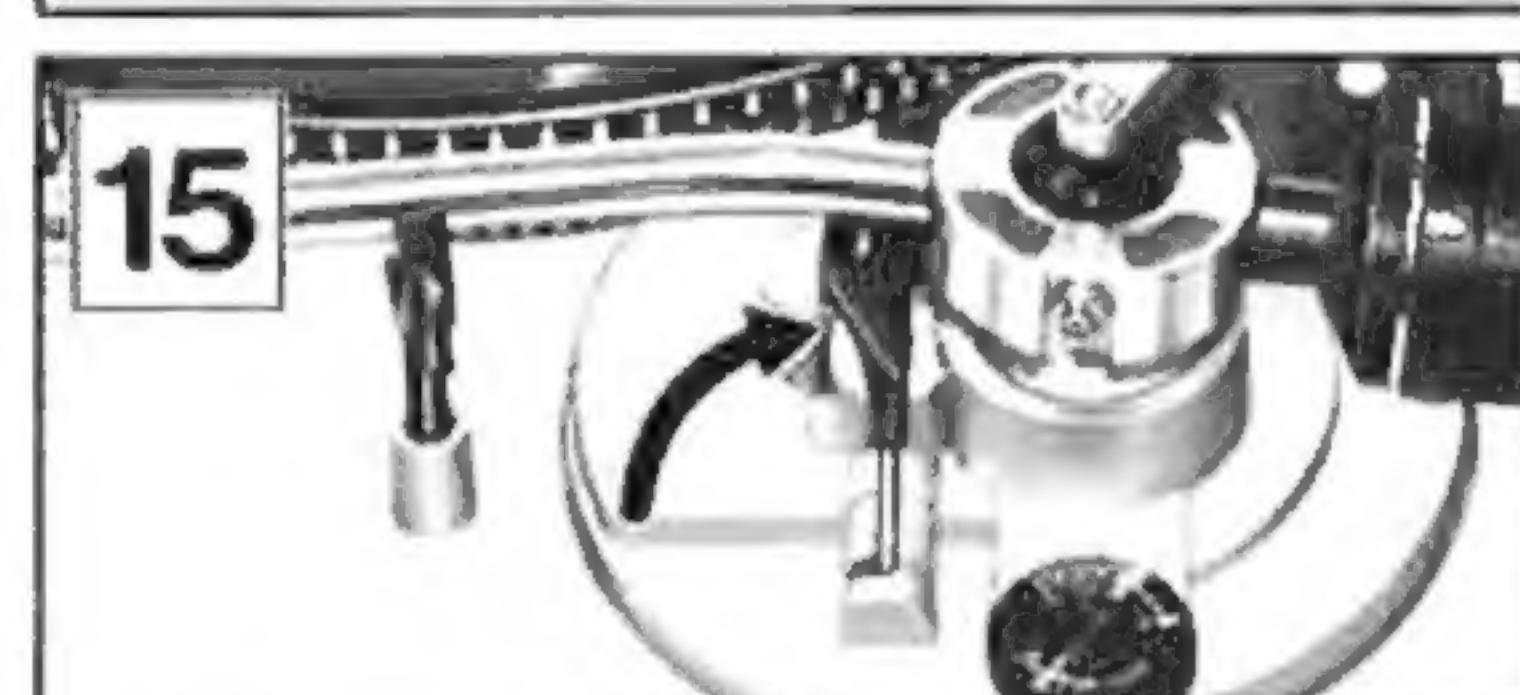
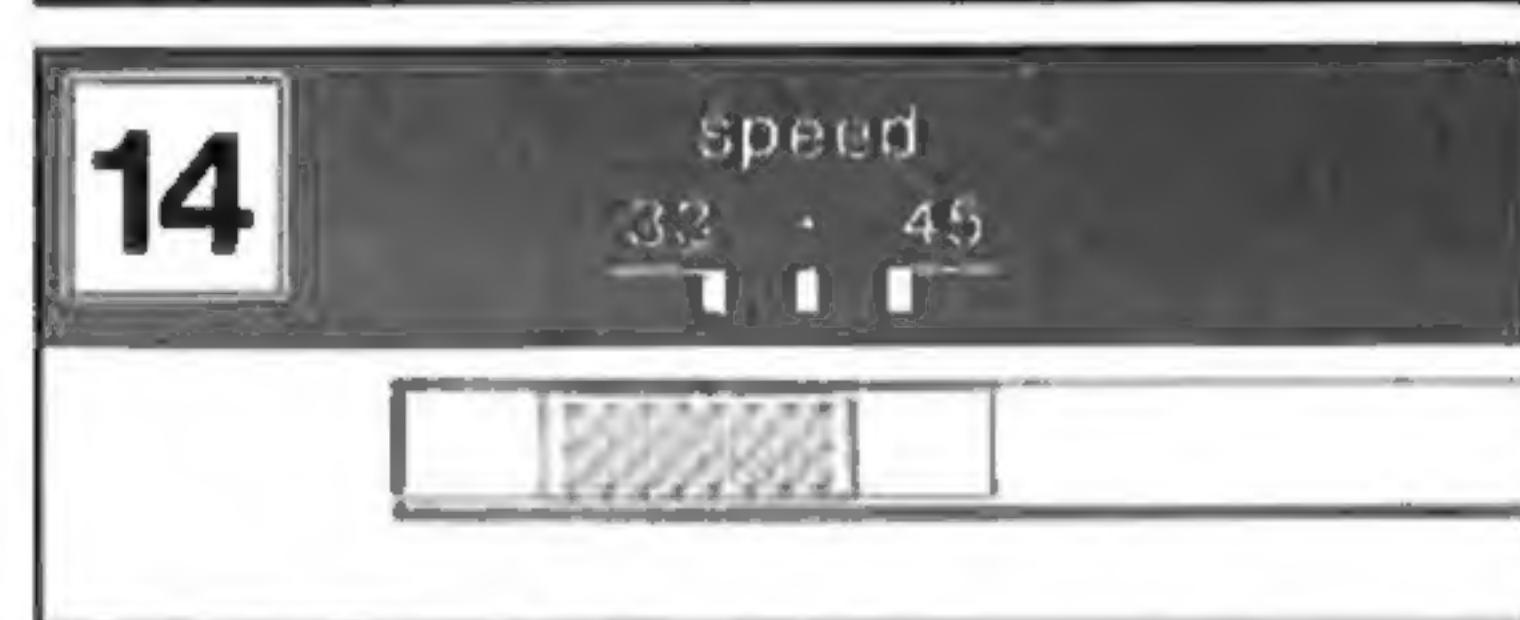
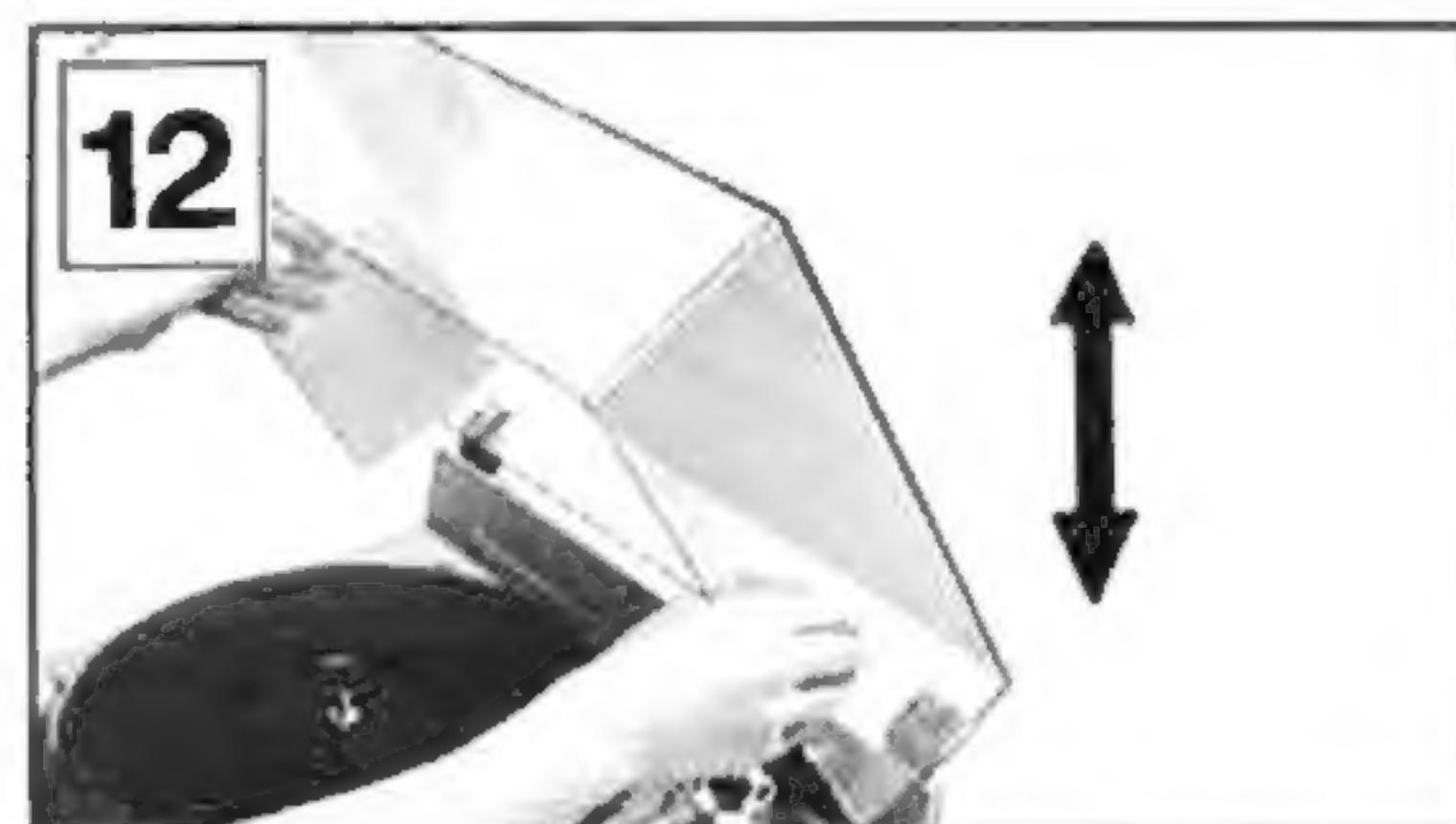
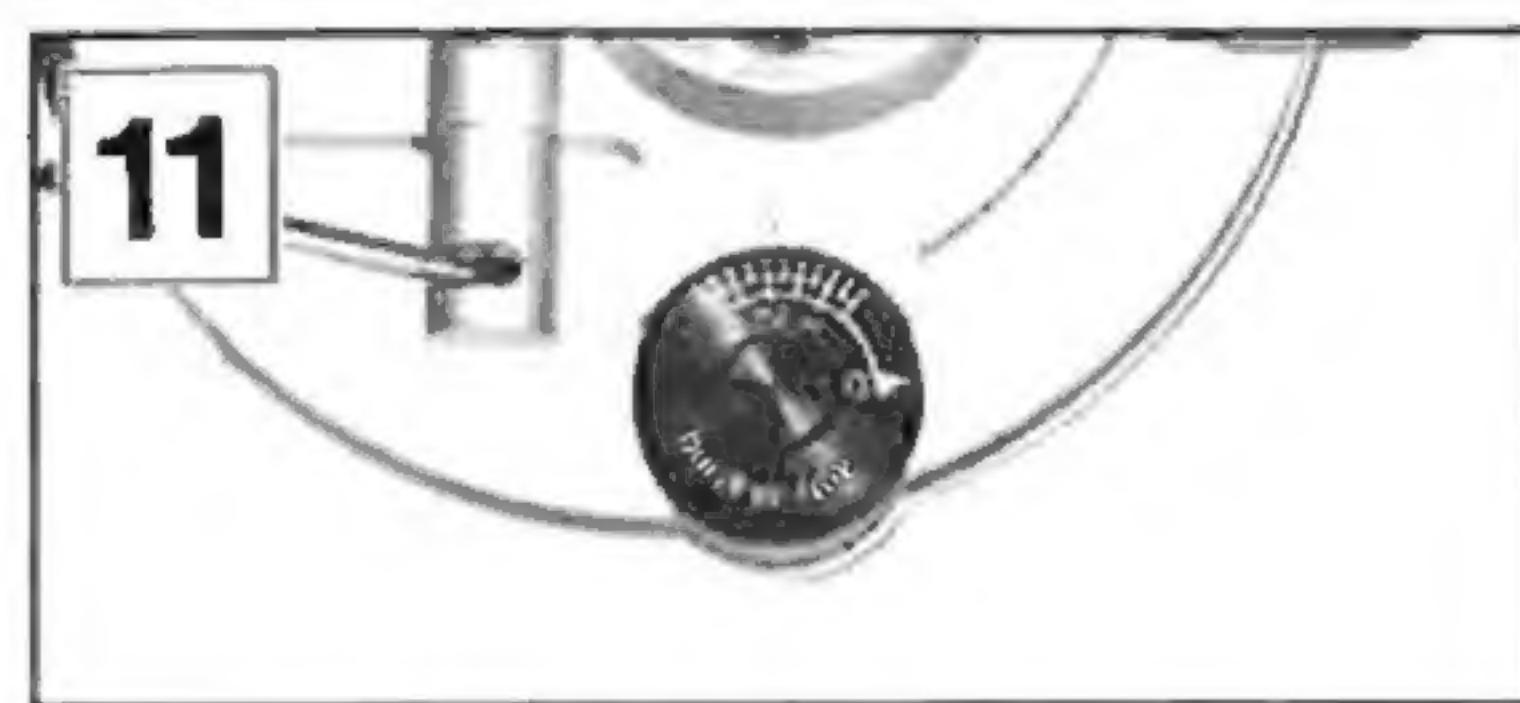
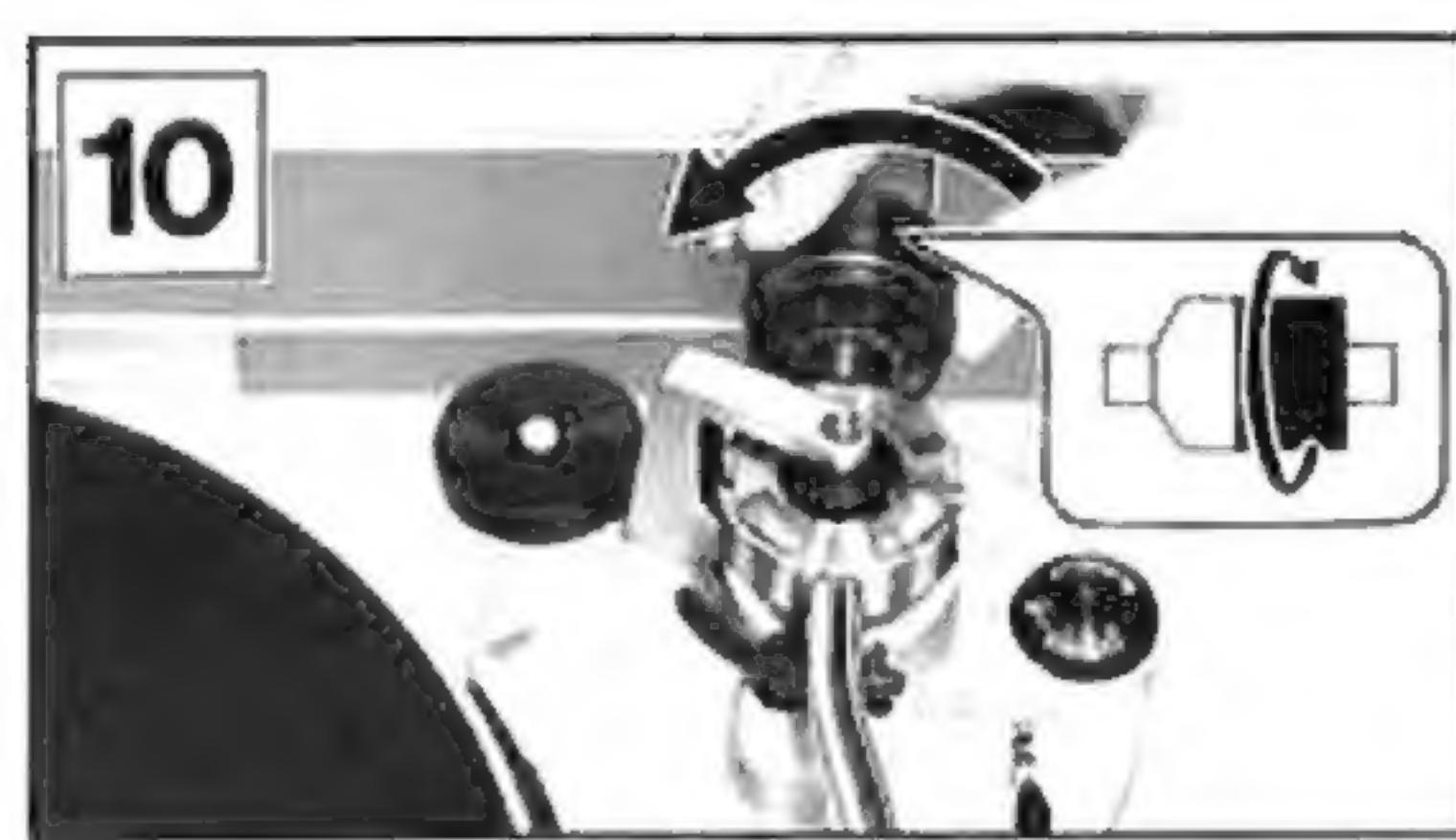
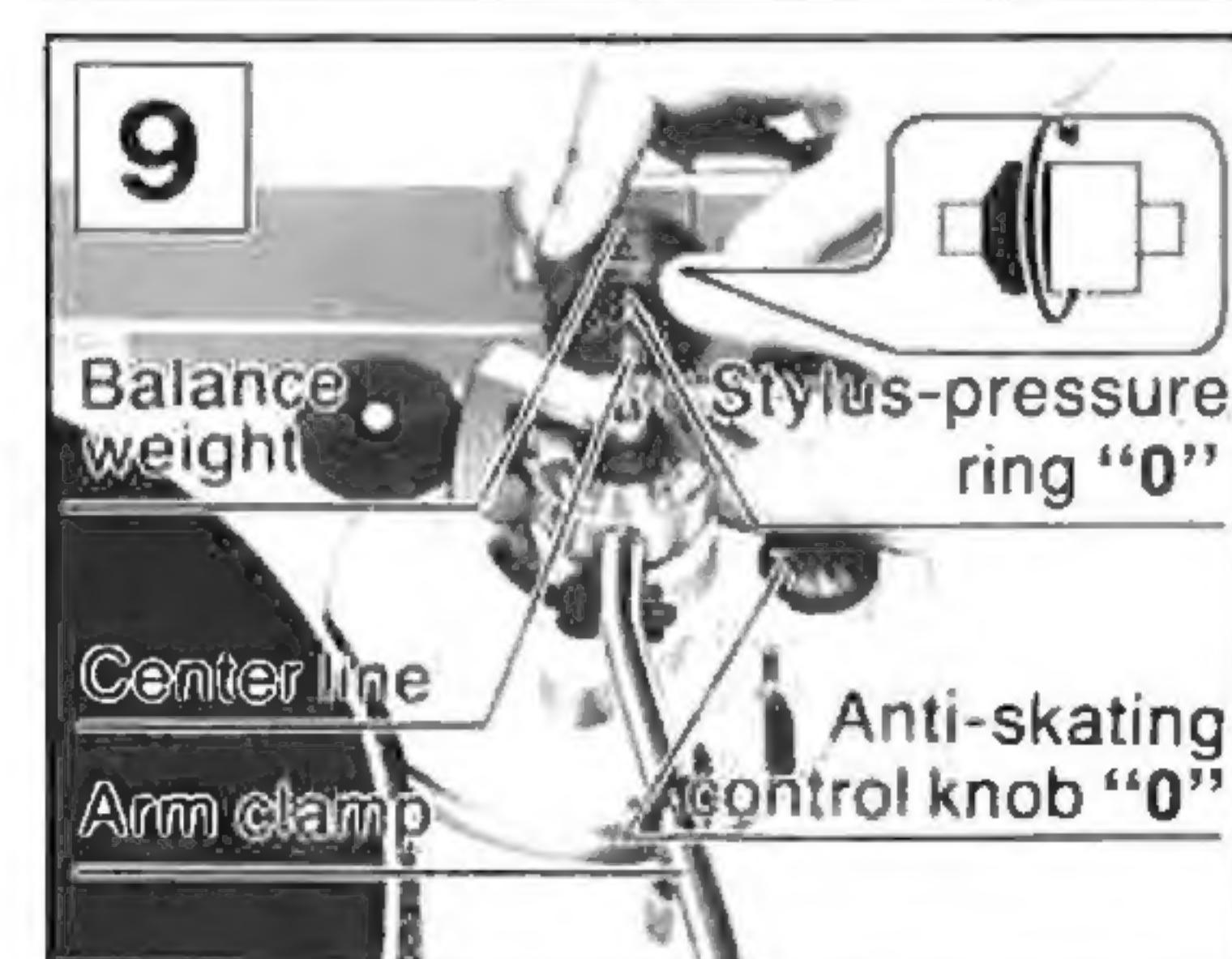
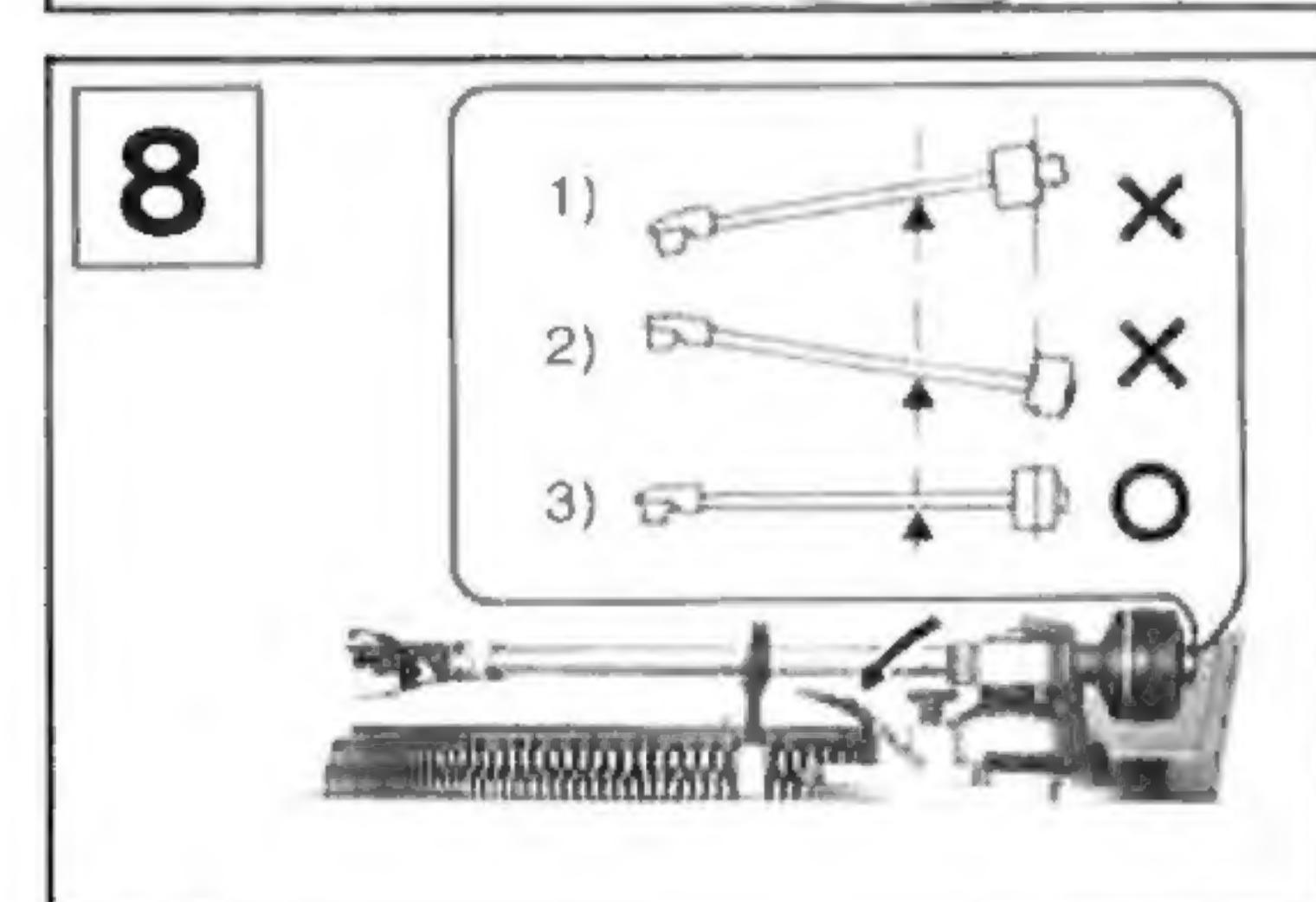
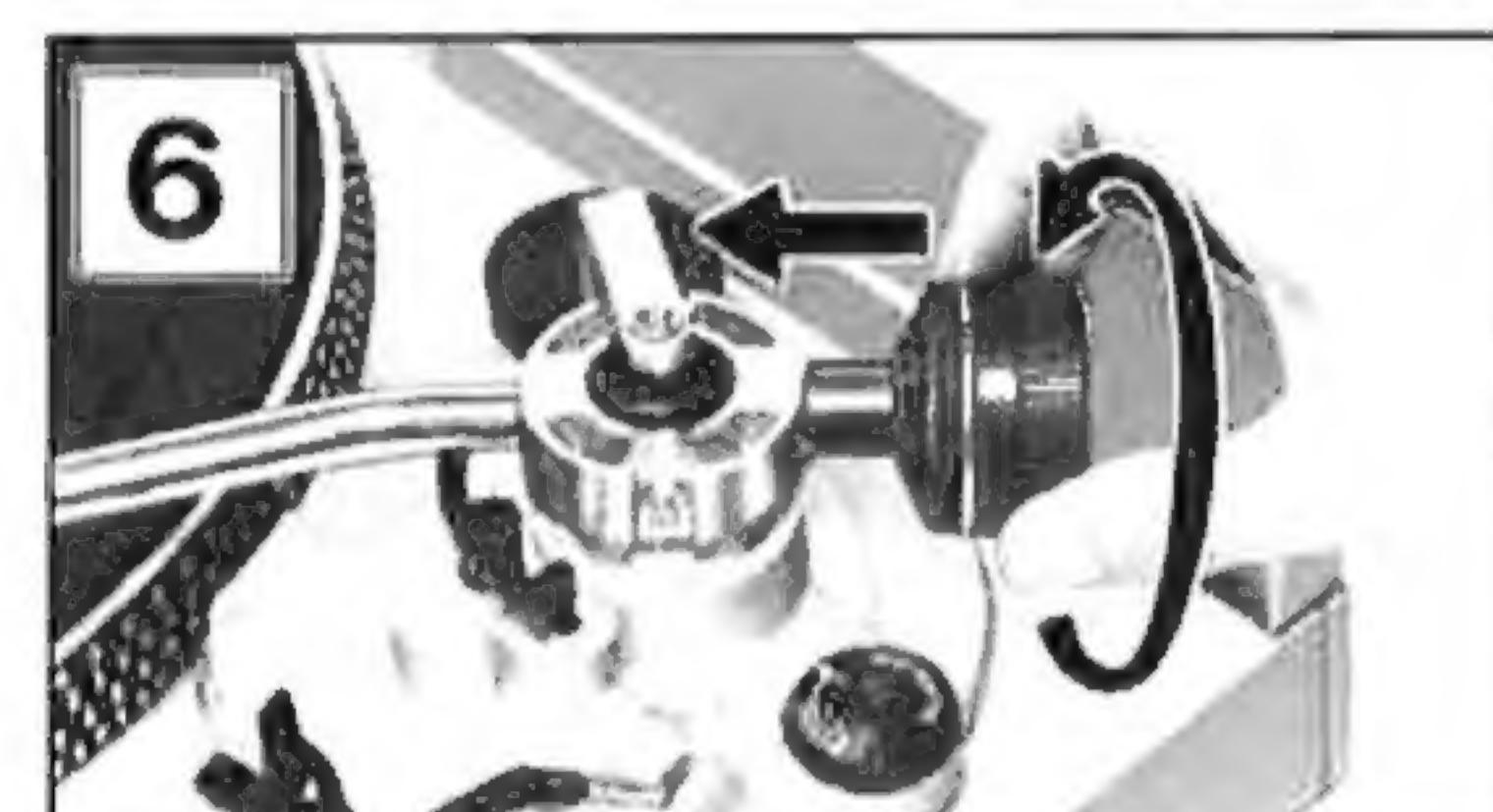
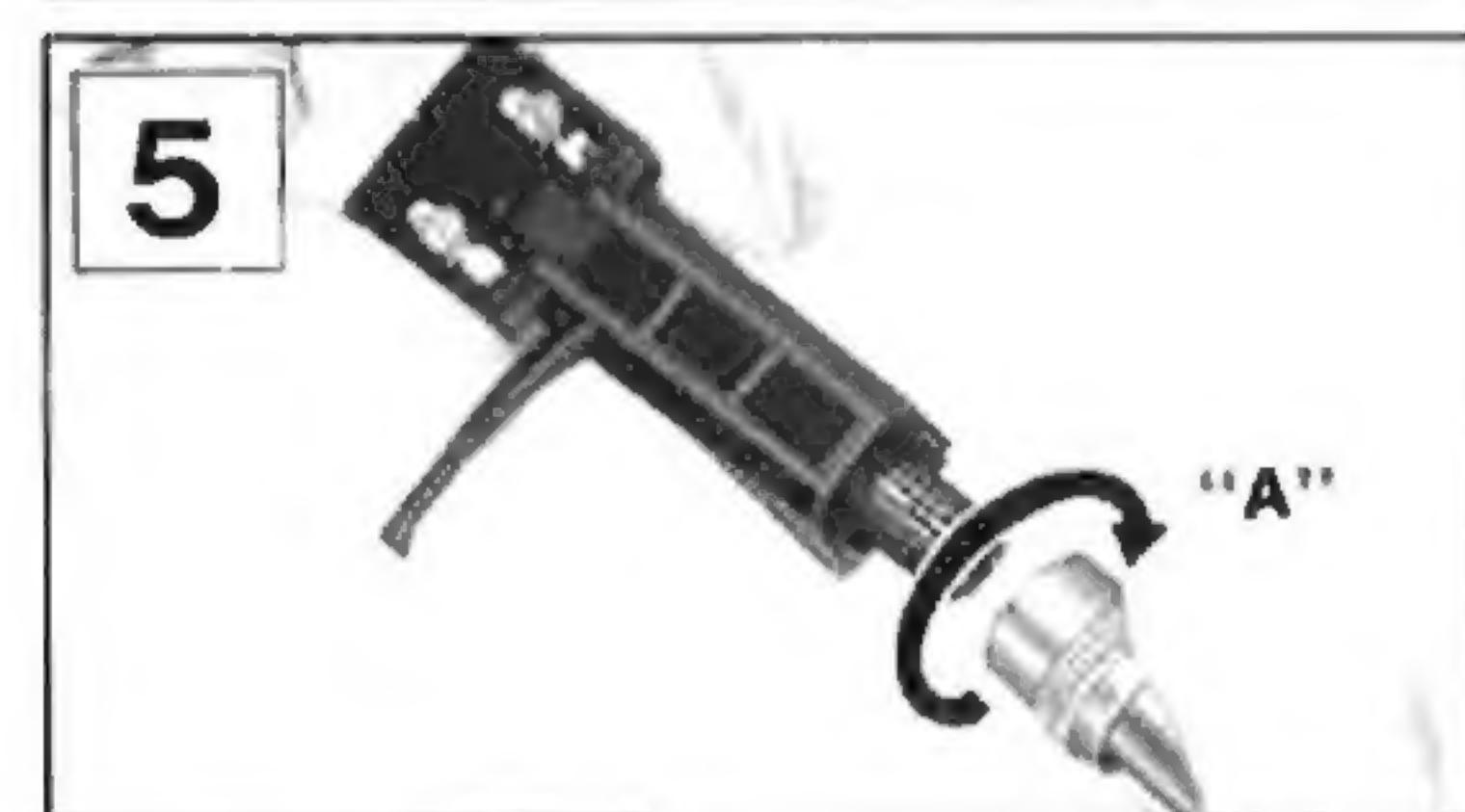
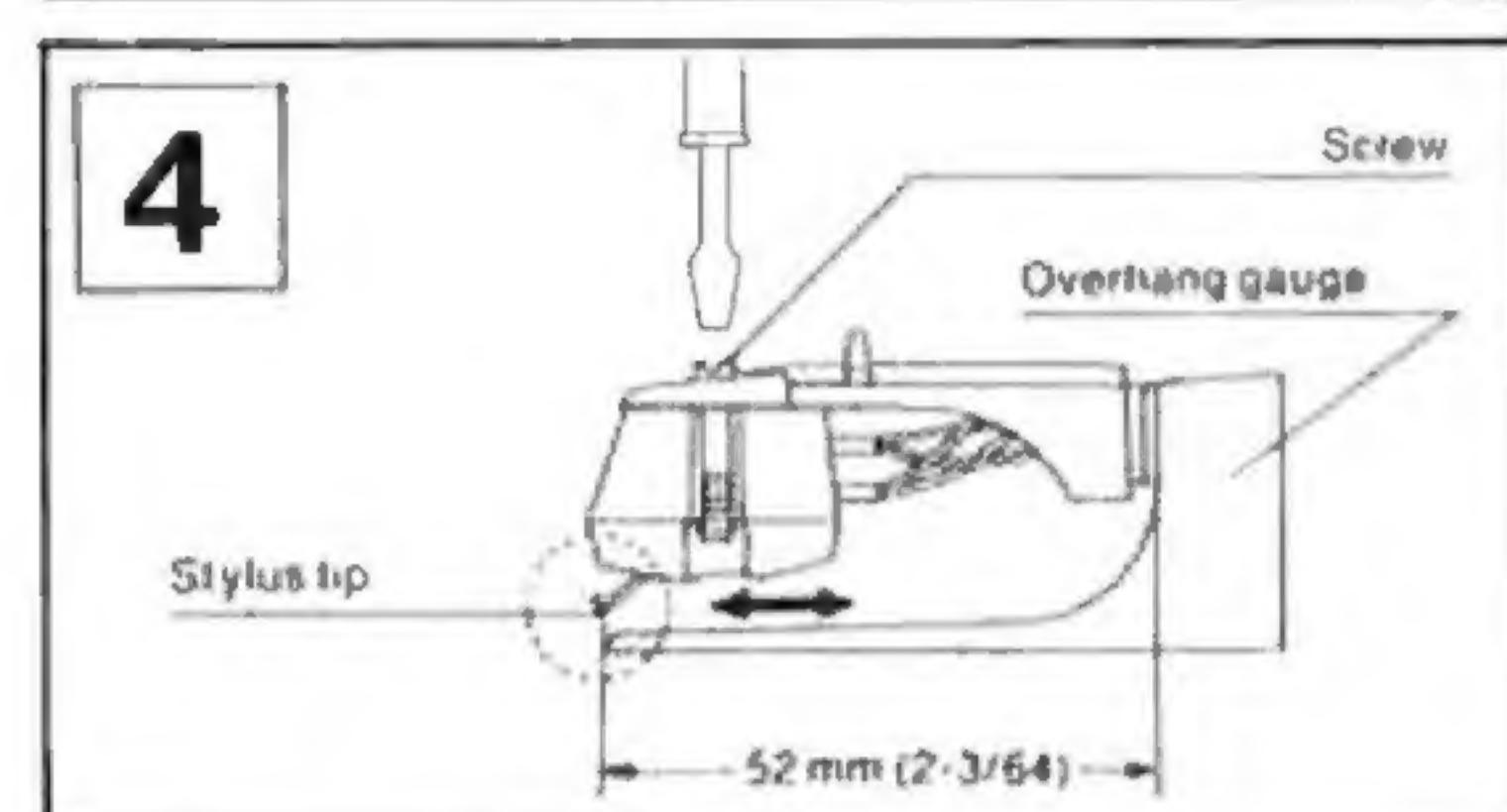
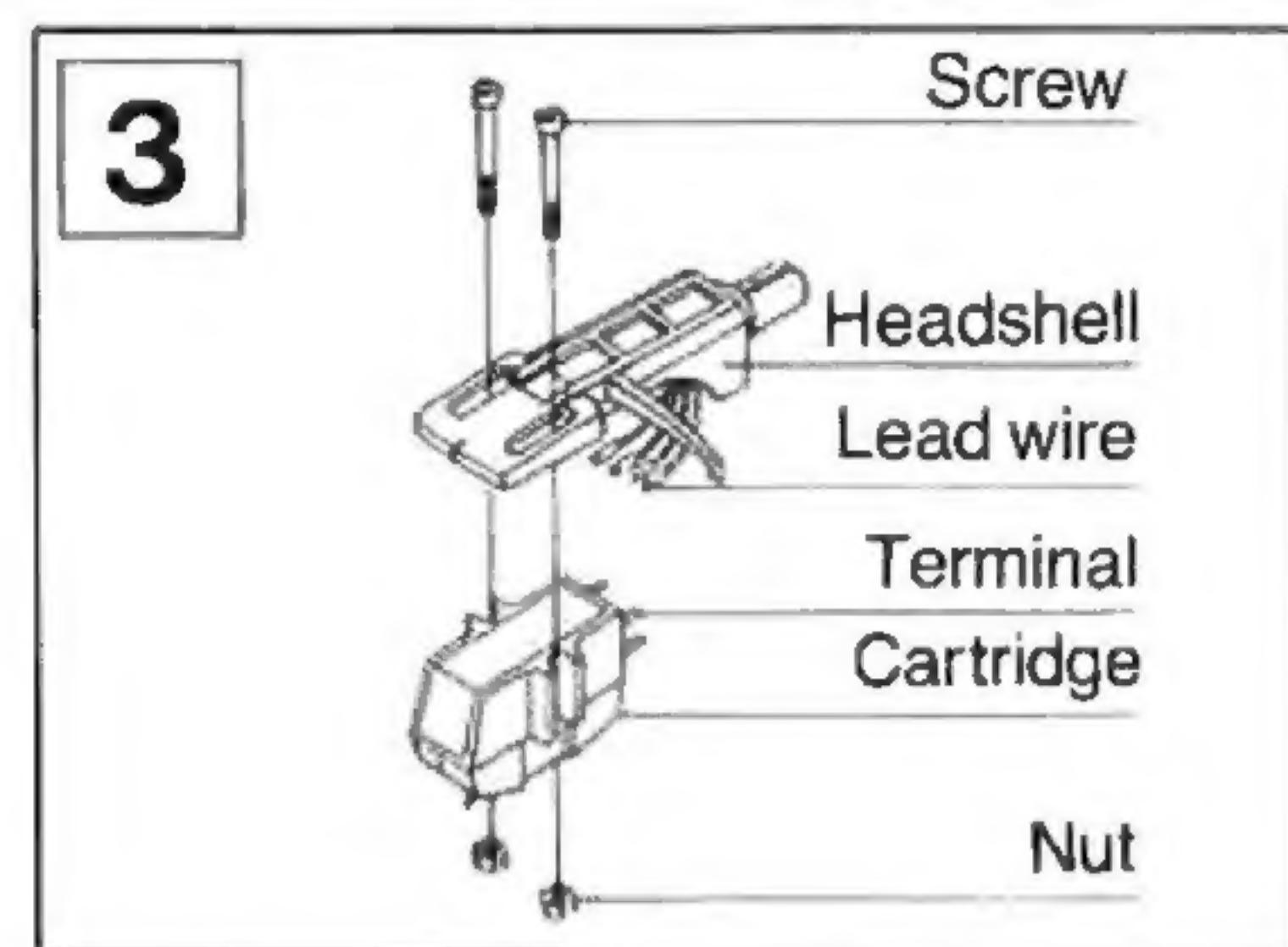
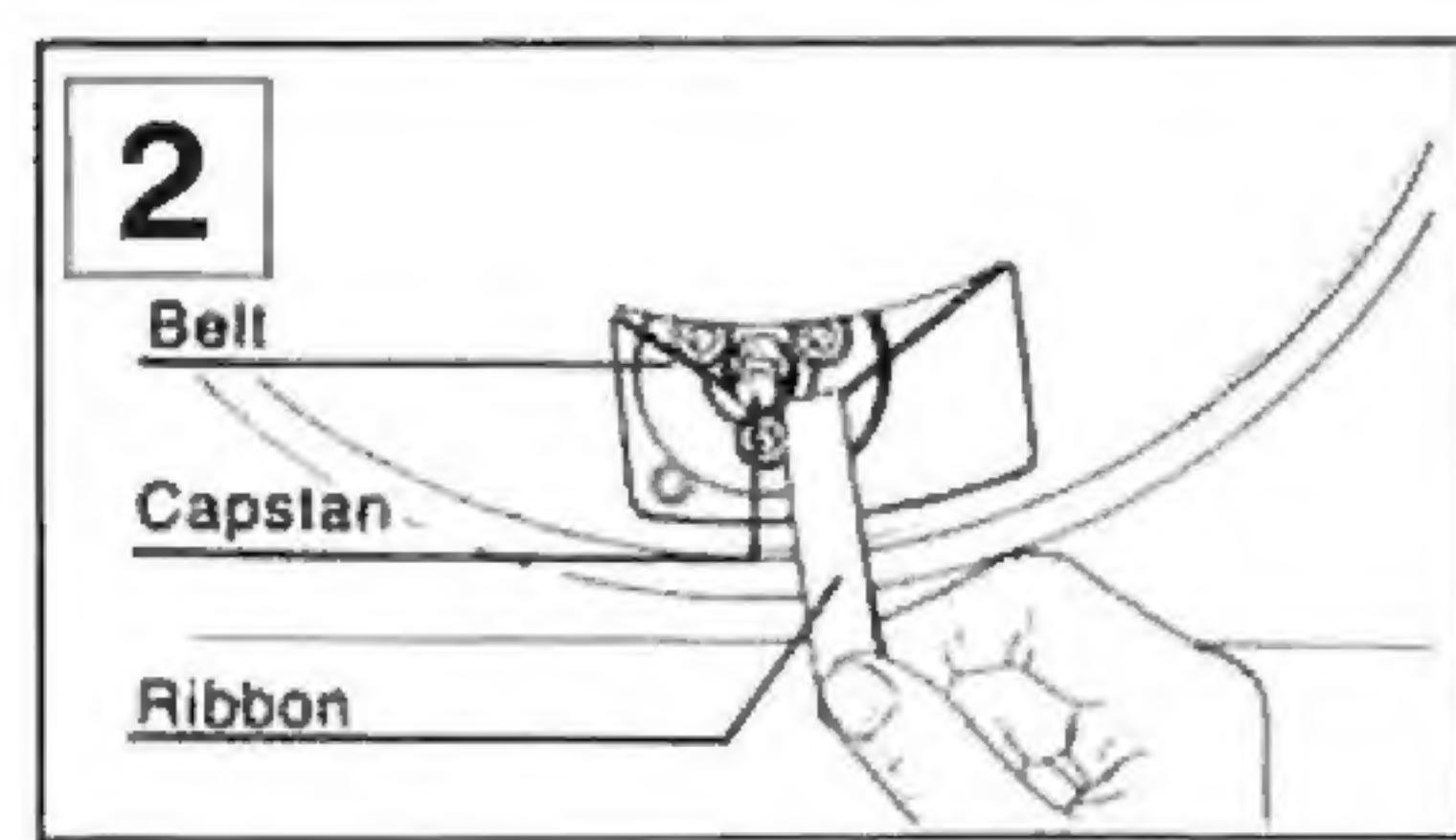
Never connect the AC power plug before assembly has been completed.

Attach the dust cover last, so that assembly and adjustments can be made easier.

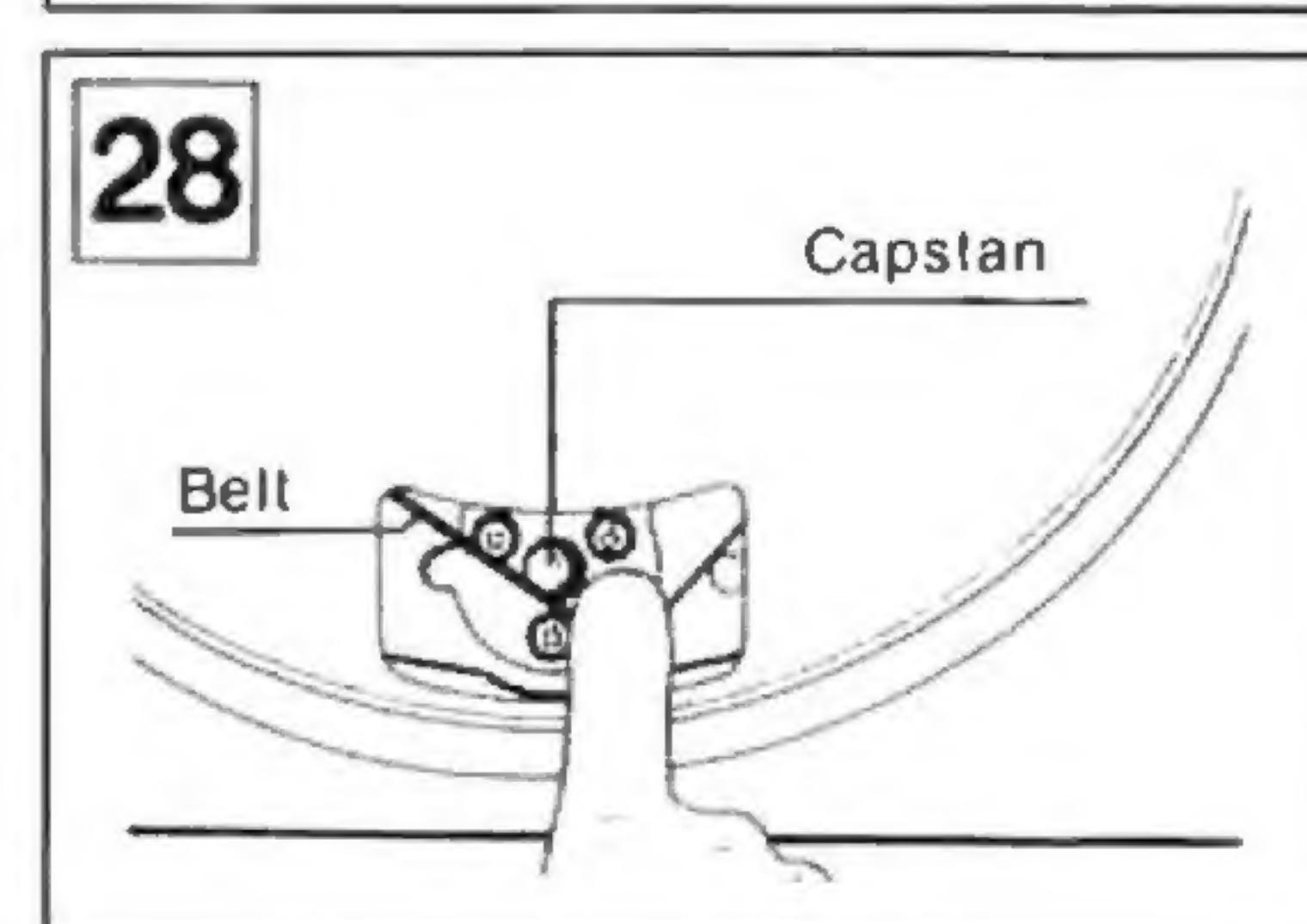
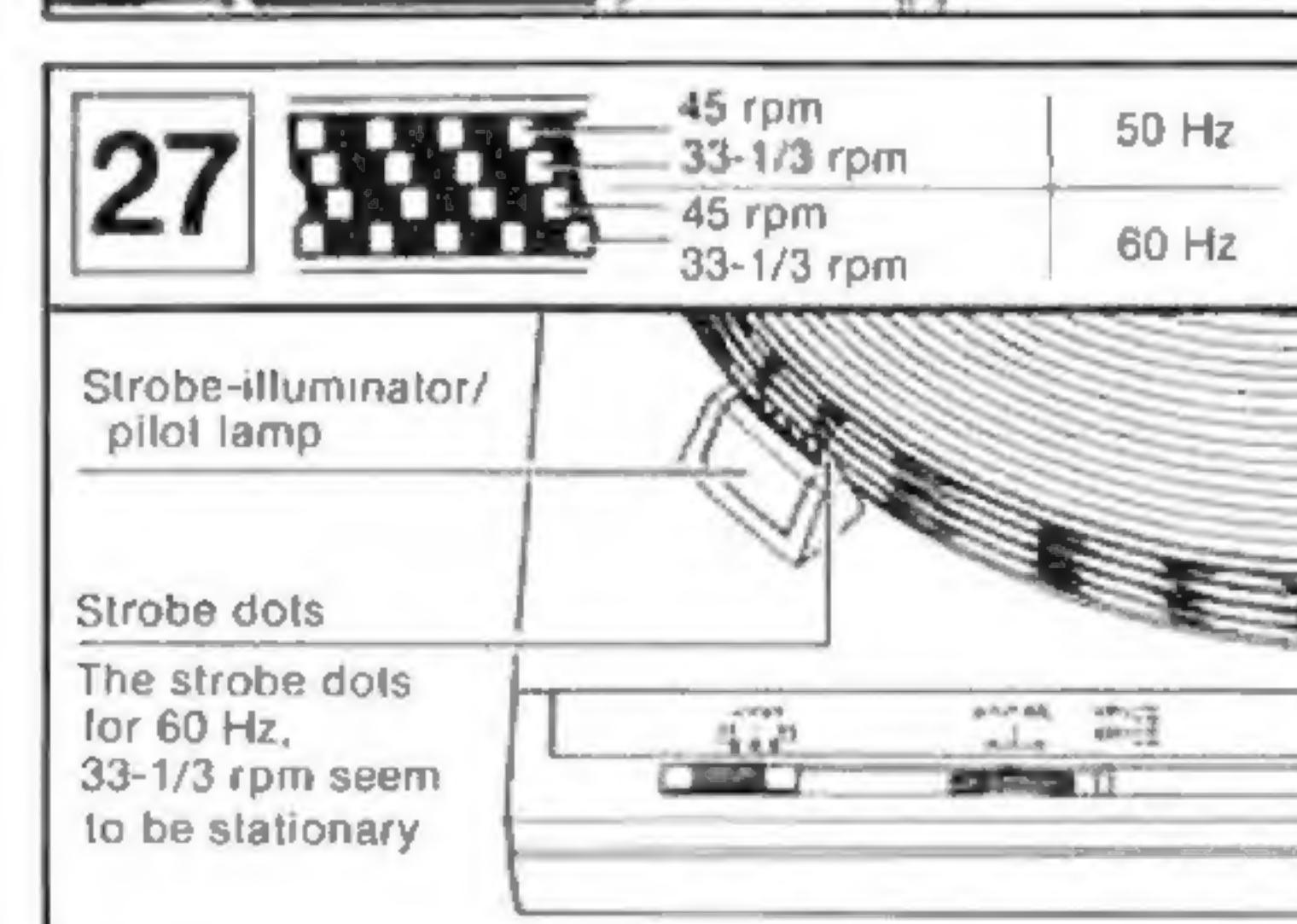
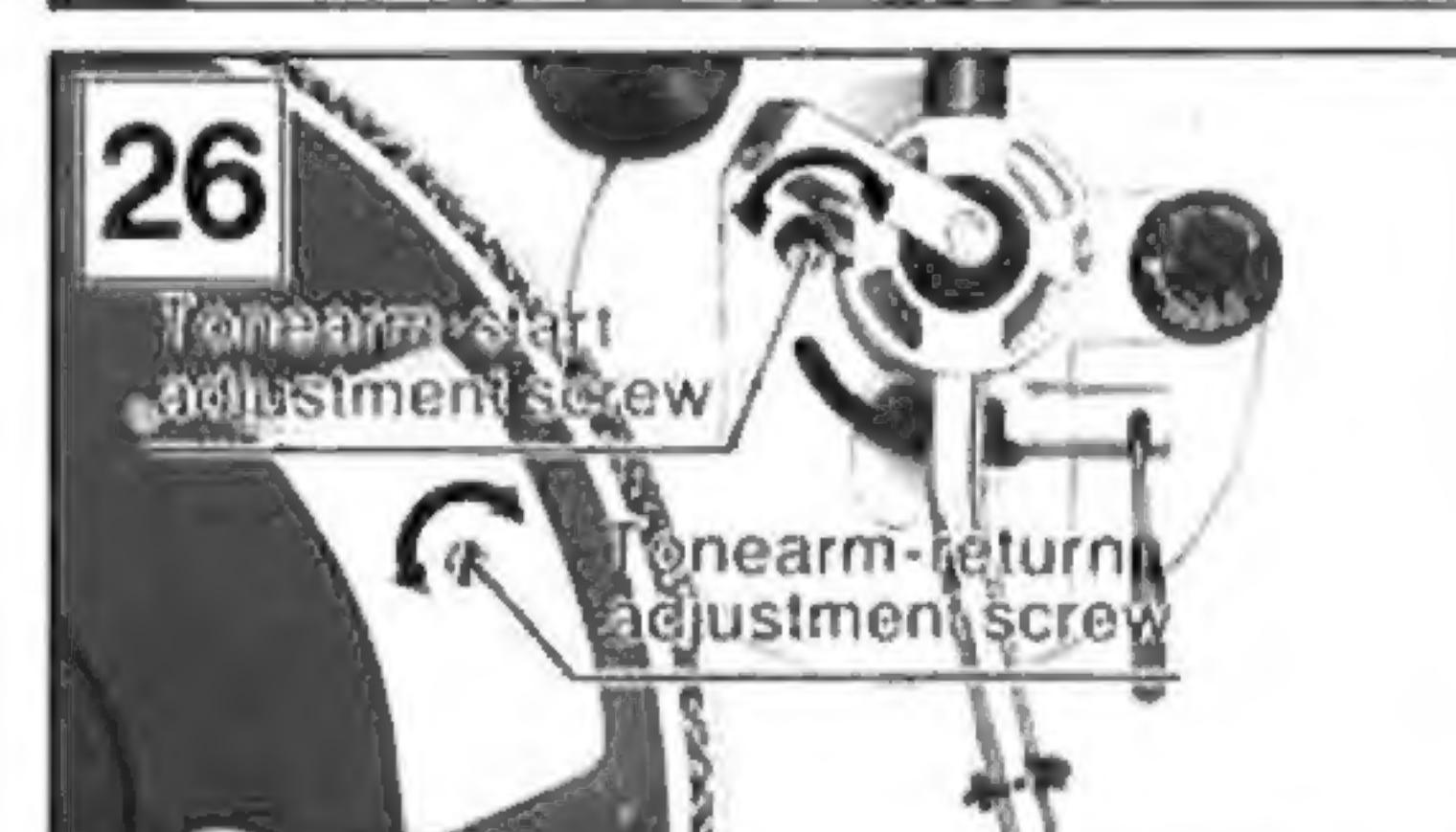
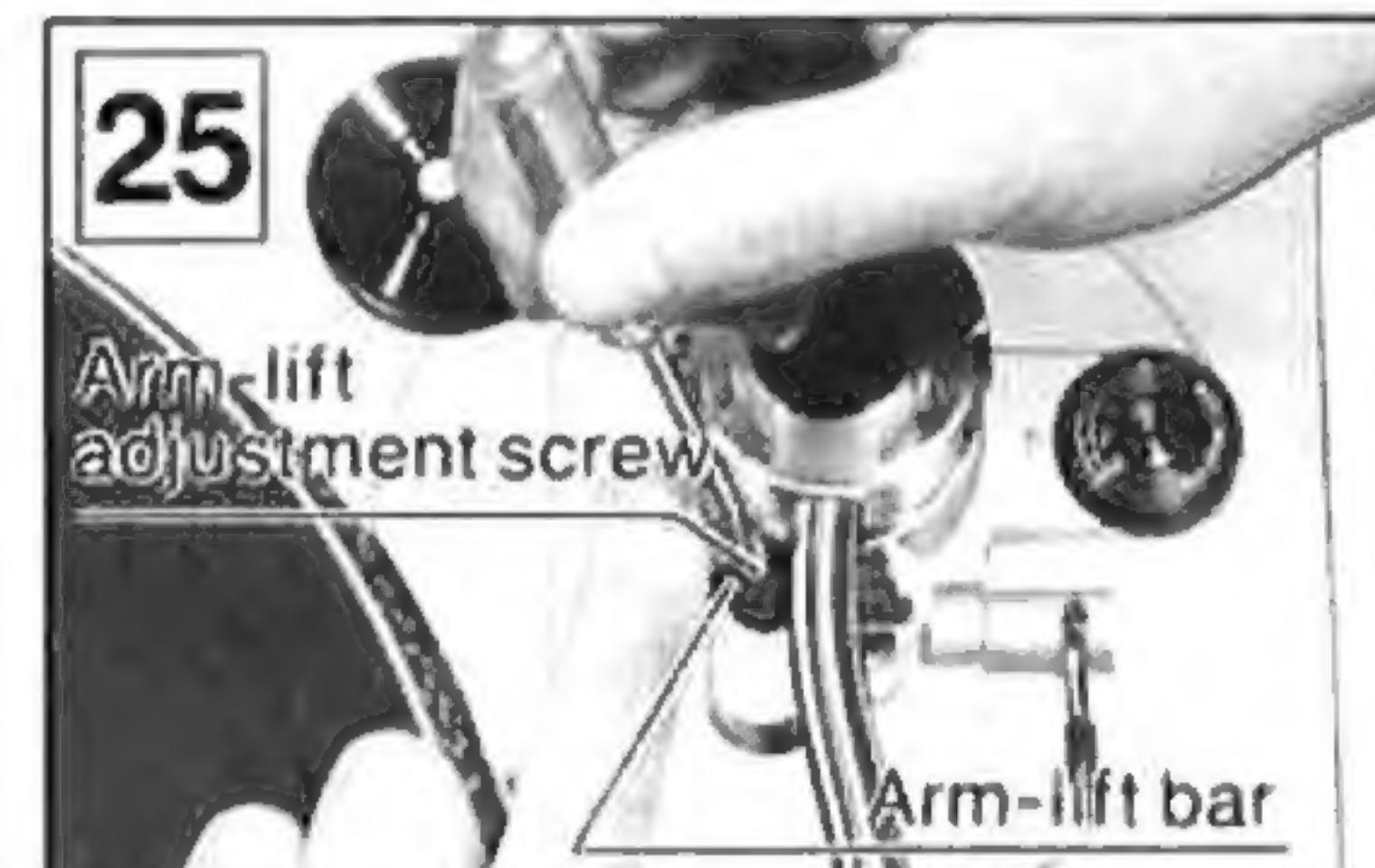
■ Checklist of parts

Turntable unit	1
Turntable platter	1
Turntable mat	1
Dust cover	1
Multiple-play spindle	1
Single-play spindle	1
45-rpm adaptor	1
(for multiple-play)	
45-rpm adaptor	1
(for single-play)	
Balance weight	1
Headshell	1
Overhang gauge	1

**“Warning: To prevent fire or shock hazard,
do not expose this appliance to rain or moisture.”**



Approx. 15 mm. (19/32")



We want to thank you for selecting the SL-B5.

For optimum performance, we recommend that you read these instructions through carefully, *before assembling*.

Assembly and set-up

■ Installation of turntable platter (See Fig. 2.)

1. Place the turntable platter on the center spindle.
2. Attach the belt to the capstan using the ribbon (provided) as shown in the picture. Then, remove the ribbon.
3. Place the turntable mat on the platter.

Note:

After having placed the turntable mat on the turntable platter, manually rotate the turntable platter clockwise about 10 times.

This will disengage the automatic mechanism from the tonearm gear, which, in rare cases, may have moved out of its normal position during transportation.

■ Installation of cartridge (See Fig. 3.)

When you install a cartridge, refer to the operation instructions of that cartridge.

During installation, attach the stylus protector to guard the stylus tip from damage.

1. Connect the lead wires to the cartridge terminals.
The terminals of most cartridges are color coded. Connect each lead wire to the terminal of the same color.

White (L+) Left channel+

Blue (L-) Left channel-

Red (R+) Right channel+

Green (R-) Right channel-

2. Install a cartridge to the headshell, and tighten it with screws provided with the cartridge.

■ Adjustment of overhang (See Fig. 4.)

1. Insert the headshell into the gauge.
2. Loosen the mounting screws with a screwdriver and move the cartridge forward or backward until the stylus tip lines up with the edge of the gauge.
3. Tighten the mounting screws without moving the cartridge.

Note:

Your cartridge is now adjusted for lowest tracking error and minimum distortion.

This gauge is exclusively designed for this tonearm.

■ Installation of headshell (See Fig. 5.)

Insert the headshell into the front end of the tubular arm, and turn the locking nut clockwise (in the direction shown by the arrow "A"), with the headshell firmly held horizontally.

■ Installation of balance weight (See Fig. 6.)

Release the arm clamp and remove the tonearm from the arm rest to provide enough space for inserting the balance weight.

Place the balance weight on the rear shaft of the tonearm, turning it in the direction of the arrow.

■ Adjustments of horizontal zero (0) balance and stylus pressure

1. Remove the stylus protector, if your cartridge has a detachable one. Be careful not to touch the stylus tip.
2. Carefully release the arm clamp and lift the tonearm from the arm rest to free it.
3. Turn the entire balance weight clockwise (indicated by the arrow "A") or counterclockwise (indicated by the arrow "B") until the tonearm is approximately balanced horizontally (floats freely). (See Figs. 7 and 8.)

Note:

- 1) When the balance weight is moved excessively towards the front of the turntable the tonearm will be out of balance, making the cartridge end too low. If this occurs, turn balance weight in the direction of arrow "B", so that it moves slightly towards the back of the turntable.
- 2) When the balance weight is moved towards the back of the turntable, the tonearm will again be out of balance causing the cartridge end to be too high. If this happens turn the balance weight in the direction of arrow "A" so that the balance weight moves forward.
- 3) When the balance weight is perfectly adjusted, the tonearm will be in a horizontal state.

During the adjustment of the horizontal zero (0) balance, be careful that the stylus tip of the cartridge does not contact the turntable mat or turntable base.

4. After the tonearm is horizontally zero (0) balanced, temporarily refasten the tonearm with the arm clamp.
5. Hold the balance weight stationary with one hand, as shown in the picture, and rotate only the stylus-pressure ring to bring the numeral "0" of the ring into alignment with the center line on the tonearm rear shaft.

(See Fig. 9.)

The adjustment of the horizontal zero (0) balance is now completed.

6. After adjusting the horizontal zero (0) balance, turn the balance weight in the direction of the arrow and align to the correct stylus pressure. (See Fig. 10.)

(Follow the cartridge manufacturer's recommendation.) As the stylus-pressure ring moves in step with the balance weight, proper stylus pressure can be selected by directly reading the graduated ring.

Note:

Set the stylus pressure to the maximum recommended value for your cartridge in cases where the record has an extremely high recording level, where the unit is operated in a room at low temperatures, or, in places in which the unit is subjected to vibrations.

■ Adjustment of anti-skating control

(See Fig. 11.)

Set the anti-skating control knob to the same value as the stylus pressure.

Note:

When a cartridge with an integral dust brush is used, follow the cartridge manufacturer's recommendation for adjusting both stylus pressure and anti-skating force.

■ Installation of dust cover (See Fig. 12.)

Place the dust cover into the hinges from directly above, holding it at both sides. For detaching the dust cover, first be certain to raise it as illustrated before removal.

Note:

Opening or closing of the dust cover during play should be avoided. This may not only cause undesired vibrations, but may also result in skipping of the stylus.

If you must open the dust cover during play, do so as gently as possible.

Location of unit

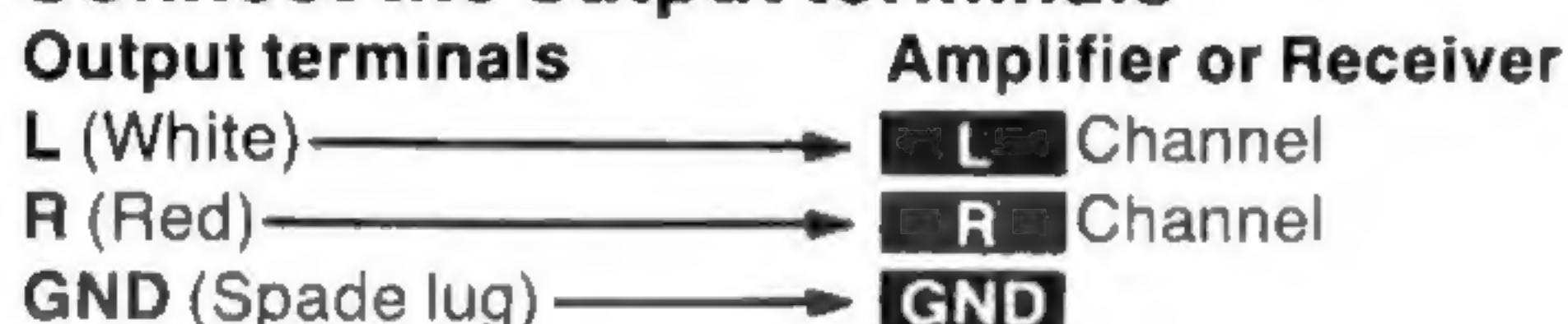
- Place the unit in a stable and horizontal position where there is little or no vibration.
- Place the unit as far from the speakers as possible. This is to isolate the unit from acoustic feedback from the speakers.
- Do not place the unit where it is exposed to direct sun, dust, moisture, heat or electronic interference.
- Keep it in a well ventilated place, and out of reach from small children.

Connections

■ Connect the AC power plug

Connect the AC power plug to an AC wall socket.
(120 volts only)

■ Connect the output terminals



Note:

- Be sure to connect the ground wire firmly to the terminal on amplifier or receiver. If this connection is not made or is loose, a power source "HUM" will result.
- Check all other connections to amplifier or receiver, and speakers.

How to operate

■ Manual play of a record

1. Install the single-play spindle on the center spindle. (See Fig. 13.)
2. Place a clean record on the turntable mat.
3. Set the speed select knob to the desired record speed. (See Fig. 14.)
4. Remove the stylus protector, if your cartridge has a detachable one.
5. Release the arm clamp.
6. Set the cueing lever to the up position. (See Fig. 15.)
7. Move the tonearm over the desired groove.
The strobe-illuminator/pilot lamp will light up and the turntable platter will start to rotate.
8. Set the cueing lever to the down position. (See Fig. 16.)
The tonearm will descend slowly onto the record and play will begin.

When play is finished, the tonearm will automatically return to the arm rest (auto-return), and the turntable platter will stop rotation.

Note:

- If the "memo-gram" knob is in a position other than "0", play will be repeated by the number of times set; therefore, be sure to keep the "memo-gram" knob in the "0" position.
- After play is completed, fasten the tonearm with the arm clamp and set the speed select knob to the "●" position.
- Attach the stylus protector again, to protect the stylus tip from damage.

■ Fully automatic single-play

1. Set the speed select knob in the same manner as in manual play and release the arm clamp.
2. Set the record size select knob to the diameter of the record (7" [17 cm], 10" [25 cm], or 12" [30 cm]) you wish to play. (See Fig. 17.)

Note:

Care should be taken not to move the record size select knob when the tonearm is moving in the automatic start or automatic return cycle.

3. Push the start/stop button. (See Fig. 18.)
The tonearm will move automatically (auto-start) over the lead-in groove and descend slowly onto the record. Then play will begin.
When play is finished, the tonearm will automatically return to the arm rest (auto-return), and the turntable platter will stop rotation.

■ Repeat play of a single record

1. Set the "memo-gram" knob to the desired number of times you wish to play.
The "R" position enables you to repeat play continuously. (See Fig. 19.)

Note:

- The "memo-gram" knob may be set to a desired number, except during the automatic start or automatic return cycle.
- If you start play manually while the "memo-gram" knob is set to a number, there will be an additional repeat play.

2. Start play in the same way as for fully automatic single play.

■ Multiple-disc operation

1. Insert the multiple-play spindle carefully, aligning the key at its base with the slot of the center spindle. (See Fig. 20.)

Then, gently pushing downward, rotate the spindle clockwise until it stops. (See Fig. 21.)

To remove the spindle, push it down, turn counterclockwise until it feels loose, and lift it upwards.

Note:

Never insert or remove the multiple-play spindle when the automatic mechanism is in operation or engaged.
Before removing the multiple-play spindle, always make certain that records are removed first.

2. Stack records of the same size on the fingers of the multiple-play spindle. Never mix different record diameters.
3. Count the number of records stacked, then set the "memo-gram" knob to the number corresponding to the records; e.g., when you stack three records, set the "memo-gram" knob to the "3" position.
(See Figs. 22 and 23.)

Note:

When you stack a single record on the multiple-play spindle, you need not set the "memo-gram" knob.

4. Start play in the same way as for fully automatic single play.

■ Multiple-disc plus repeat play

Set the "memo-gram" knob to the "R" position for multiple-disc, and you can play the last record repeatedly.

■ How to stop play

Push the start/stop button. (Refer to Fig. 18.)

The tonearm automatically returns to the arm rest, and the turntable stops rotating.

Note:

Before you operate the start/stop button, make sure that the "memo-gram" knob is set at the "0" position.

If this knob is set at any position other than "0", the repeat play is continued by the number of times indicated, even if you push the start/stop button.

■ How to suspend play

Set the cueing lever to the up position. (Refer to Fig. 15.)

The stylus tip of the cartridge will be lifted from the record.

■ When you play a 45-rpm record with a large center hole

- In the case of "single-play", place the 45-rpm adaptor for single-play on the single-play spindle.
- In the case of "multiple-play", insert the 45-rpm multiple-play adaptor into the center spindle, in the same manner as the regular multiple-play spindle.

(Refer to Figs. 20 and 21.)

■ Adjustment for automatic return position

(See Fig. 26.)

(Remove the turntable mat.)

In cases where the tonearm tends to return before the playing has finished:

—rotate clockwise.

In cases where the tonearm fails to return after the last groove of the record has been played:

—rotate counterclockwise.

■ Speed adjustment (with pitch-control knob)

(See Fig. 27.)

Strobe dots are set on the rim of the turntable platter according to the power-line frequency and the speed of the records.

Make adjustment, referring to the strobe-dot indication.

1. Set the speed select knob to the speed to be adjusted.
2. Release the arm clamp and move the tonearm toward the record.

The strobe-illuminator/pilot lamp will light up and the turntable platter will rotate.

3. While turning the pitch-control knob either to the "+" side or "-" side, adjust so that the strobe dots of the turntable platter look as if they were stationary. This represents the correct speed.

"+" direction

The speed of the turntable platter will increase. Turn the knob in this direction if the strobe dots seem to be "falling back", i.e. seem to be moving counterclockwise. When the dots appear to be stationary, turntable speed is accurate.

"-" direction

The speed of the turntable platter will decrease. Turn the knob in this direction if the dots seem to be "running ahead", i.e. seem to be moving clockwise, until they appear stationary.

Moreover, the pitch control knob can be used for both 33-1/3 rpm and 45 rpm.

Adjustment is to be made according to the selected speed (33-1/3 rpm or 45 rpm).

Note:

Strobe dot pattern

The strobe-illuminator/pilot lamp of this unit employs the standard commercial power source. The frequency of such power source, when actually measured, has a fluctuation of about 0.2%.

As such a fluctuation of the power source affects the strobe illuminator, the strobe dot pattern also seems to fluctuate to a certain extent. But the unit is not affected by these fluctuations of the power source, since a DC motor is employed.

In other words, rotation of the platter will be constant, and slight shifts in the movement of the dots simply reflect normal drift in the power-source frequency.

Adjustments

■ Adjustment of arm-lift height

(See Figs. 24 and 25.)

The arm-lift height (distance between the stylus tip and record surface when the cueing lever is raised) was adjusted at the factory before shipping to approximately 15 mm. (19/32").

If the clearance becomes too narrow or too wide, turn the adjustment screw clockwise or counterclockwise, while pushing the arm lift down.

Clockwise rotation

—distance between the record and stylus tip is decreased.

Counterclockwise rotation

—distance between the record and stylus tip is increased.

Note:

As the adjusting screw has a hexagonal head, be sure to make the adjustment while depressing the arm lift, or the screw will not move freely.

Also be sure that the hexagonal head retracts correctly into the arm lift when the latter is released.

■ Adjustment for automatic start position

(See Fig. 26.)

(Remove the rubber cap.)

In cases where the stylus tip sets down outside of the record

—rotate clockwise.

In cases where the stylus tip sets down too far in the recorded groove

—rotate counterclockwise.

Notes and maintenance

■ Never move the "record size select" knob and "memogram" knob during automatic cycle (auto-start and auto-stop).

■ In the case of multiple-play, be sure to use records of the same size.

■ Records having sizes other than 17 cm, 25 cm and 30 cm (7", 10" and 12") should be played manually.

Your turntable is designed for automatic handling of records that adhere to accepted industry dimensions. Therefore, use the unit manually for records other than standard sizes.

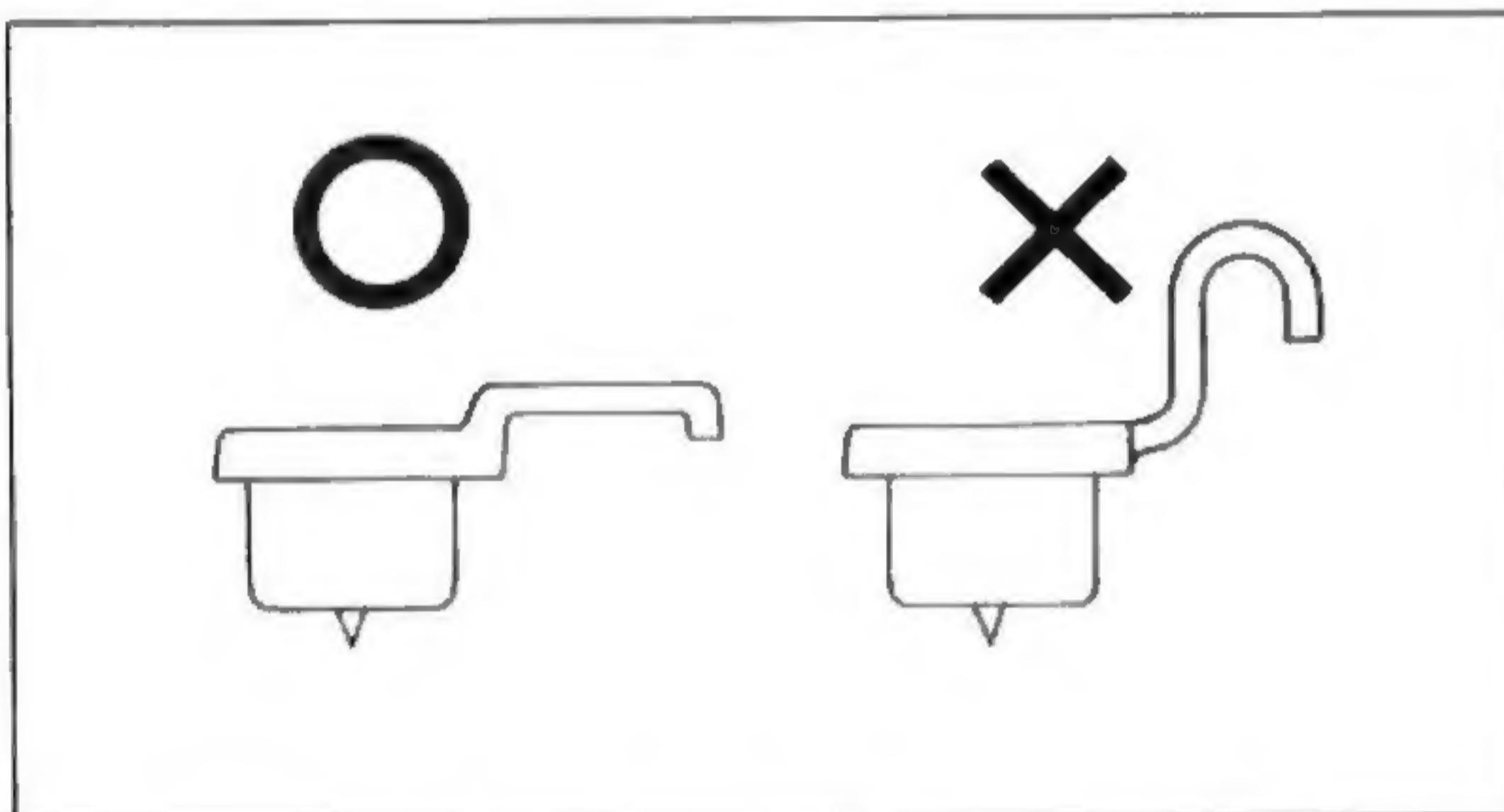
Note:

Warped records or those especially thinner or thicker than standard should also be played manually only.

If such records are used for multiple-play operation, two records may drop simultaneously, or the record may not drop at all.

■ When using other headshells, make sure that the headshell configuration is compatible.

When other types of headshells are employed, the handle portion of the headshell may strike against the inner upper surface of the dust cover during automatic motion of the tonearm. In such a case, we recommend that the dust cover be left open during play.



■ Before detaching or attaching the headshell, be sure to turn the power of the amplifier or receiver off.

Detaching or attaching of the headshell with the volume control turned up may cause damage to the speakers.

■ When play is finished, be sure to secure the tonearm with the arm clamp.

After play is finished, if the unit is not to be used for some time, care should be taken to secure the tonearm to protect the stylus tip.

For the same reason, the stylus protector should also be attached.

■ Wipe the headshell terminals from time to time.

Dust and dirt at the headshell terminals may result in increased "HUM" noise or intermittent sound. Use a soft dry cloth to clean the headshell terminals.

■ Use the cueing lever only for single-play operation (one record only).

■ Wipe the dust cover and turntable base with a soft, dry cloth.

Never use any cleaners containing alcohol, benzine or thinner.

Use of a chemical dust cloth should also be avoided. Be sure that the dust cover is not exposed to insecticide spray.

To remove stubborn fingerprints or grease spots, detach the dust cover and use a soft cloth slightly moistened with a mild soap-and-water solution.

Do not wipe the dust cover during play, for the tonearm may be influenced due to the generation of static electricity and/or vibrations.

■ Dust and dirt should be carefully removed from stylus tip or records.

Dust and dirt on the stylus tip or record may not only result in deterioration of tone quality, but also cause undue wear of the record and the stylus tip itself.

Special stylus tip brushes and record cleaners can be purchased in most electronic supply houses.

■ How to remove and install the turntable platter.

The belt is connected to the capstan and the inner drive rim of the turntable platter.

Before removing the turntable platter, release the belt from the capstan.

When reinstalling the turntable platter, lower it over the turntable shaft and then put the belt onto the capstan.

(See Fig. 28.)

Note:

Be careful not to let oil or grease contact the belt.

If grease inadvertently contacts the belt, disconnect the AC power cord first and wipe the belt clean with alcohol.

■ When moving the unit to distant places

Pack the unit in exact reverse order of unpacking. Use the same box and same packing materials and take the following steps:

- Return the tonearm to the arm rest. Secure the arm clamp and affix with tape to prevent slippage.
- Remove the dust cover, balance weight and headshell/cartridge. Wrap each in original protective material or if not available, use dust-free blankets or the like.
- Remove the turntable mat. With finger, lift drive belt from the capstan (pulley) through opening. Remove the platter and repack as directed.
- Wrap the turntable base with dust-free blanket or packing paper to prevent any damage during move.

For longer and safer use of this unit

In order to receive the best service from this unit, and for the safest operation, carefully read the following information before operation.

■ Power source

It is very dangerous to use this unit at a voltage which is different from the rated voltage.

There is danger of combustion if the unit is connected to a power source which is different from the rated voltage.

Be very careful concerning this point.

Direct current cannot be used.

There are some places, such as ships, where direct current is used as the power source. Before connecting the unit, check and confirm the power source.

■ Connection of power cord

Be sure to never touch the power cord with wet hands, or standing in or by water, because there is danger of electric shock. This is true, of course, of all electric equipment.

Do not pull the power cord.

Never pull the power cord to disconnect it. Always pull the plug only.

■ Location of unit

Choose a place which is not in direct sunlight.

Select a place which will assure good ventilation.

■ Never place heating equipment nearby.

Be sure to keep stoves and other sources of heat away from this unit, because heat radiated by such equipment may cause deformation of plastic parts, damage the cabinet, or, at worst, cause a fire.

■ Especially for families with children.

Take care that no small items, such as metal objects, are put inside this unit.

In addition, children should be especially cautioned not to put anything into the ventilation holes, such as toys or a screwdriver, because these things may cause an electric shock and/or result in a malfunction of the unit.

■ If water spills on the unit.

If water should happen to spill on the unit, (from a spilled drink or overturned vase, for example), there is danger of fire or electric shock. If safe disconnect the power plug from the electric outlet immediately, and contact the store from which the unit was purchased.

■ Reconstruction can cause accidents.

Absolutely never try to remodel, reconstruct or repair this unit yourself. Do not attempt to touch any internal parts because doing so may result in an electric shock or other accident.

■ Be sure the power is off.

After you have finished using this unit, check once more to be sure that the power is off. If the unit is left with the power on for a long period of time, it may not only be damaged, (thus shortening its useful life), but also may lead to a dangerous accident.

Specifications

■ General

Power supply:	120 V, AC, 50 or 60 Hz
Power consumption:	3 W
Dimensions:	43.0×17.9×37.2 cm (16-59/64"×7-3/64"×14-41/64")
Weight:	4.8 kg (10.6 lb.)

■ Turntable section

Type:	Automatic turntable
	(Auto start Auto return Auto stop Multiple play Repeat play)
Drive method:	Belt drive
Motor:	Frequency generator servo DC motor
Turtable platter	Aluminum die-cast Diameter 30.4 cm (12 inches)
Turtable speeds:	33-1/3 rpm and 45 rpm
Pitch control:	±6% adjustment range
Wow and flutter:	0.045% WRMS (JIS C5521) ±0.06% peak (IEC 98A Weighted)
Rumble:	-70 dB (IEC 98A Weighted)

■ Tonearm section

Type:	Universal tonearm
Effective length:	230 mm (9-1/16")
Overhang:	15 mm (19/32")
Tracking error angle:	Within 2°32' at the outer groove of 30 cm (12") record Within 0°32' at the inner groove of 30 cm (12") record
Offset angle:	22°
Effective mass:	12 g (without cartridge)
Stylus pressure adjustment range:	0-2.5 g
Applicable cartridge weight range:	6-9.5 g 14-17.5 g (including headshell)
Headshell weight:	8 g

Specifications subject to change without notice.
Weight and dimensions shown are approximate.

Features

■ Fully-Automatic Operation

All operations in this unit are completely automatic, yet mechanical movements are accurate and silent. Full protection to records and stylus tip is assured. This is due to Technics original "memo-gram" function which enables you to enjoy manual play, auto-start, auto-return, auto-stop, repeated play from 1 to 6 times (plus continuous play); and, in addition, multiple play, capable of playing 1 to 6 records continuously.

■ Front panel controls provide exceptional convenience

■ "TNRC"** base material provides an acoustic shield

**"TNRC" . . . Technics Non-Resonance Compound

■ Electronic speed switching

■ Pitch control with illuminated stroboscope

■ Viscous-damped cueing

■ Anti-skating control

■ Hinged, detachable dust cover

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New Jersey 07094

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